

Amendments to the Specification:

Please replace paragraph [0001] on page 1, with the following paragraph, marked up to show the changes made to the prior version:

[0001] This application is a continuation of U.S. Patent Application No. 10/243,535, filed September 13, 2002, the entirety of which is incorporated by reference herein; ~~This application~~ U.S. Patent Application No. 10/243,535 claims the benefit of ~~U.S.~~ Provisional U.S. Patent Application ~~Serial Number~~ No. 60/394,696, filed July 9, 2002, the ~~contents~~ entirety of which ~~are~~ hereby also is incorporated by reference herein.

Please replace paragraph [0042] on page 14, with the following paragraph, marked up to show the changes made to the prior version:

[0042] Figures 4B-1 and 4B-2 shows schematic diagrams demonstrating specular and diffuse reflection from a region of a tissue sample according to an illustrative embodiment of the invention.

Please replace paragraph [0095] on pages 30 and 31, with the following paragraph, marked up to show the changes made to the prior version:

[0095] Figures 4B-1 and 4B-2 shows schematic diagrams demonstrating specular and diffuse reflection from a region 416 of a tissue sample 424 according to an illustrative embodiment of the invention. Figures 4B-1 and 4B-2 demonstrates that position of the collection optics may affect whether or not data is affected by glare. The ~~first~~ diagram 420 of Figure 4B-1 demonstrates the specular reflection of light incident 430 to the surface 428 of a region 416 of tissue 424 with collection optics centered to provide an acceptance cone 433 as shown. This is analogous to the reflection of light from the top illumination source 302 illustrated in Figure 4A. There is an interface 428 between the tissue 424 and the surrounding air 426. Light 430 with illumination intensity $I_o(\lambda)$ strikes the air-tissue interface 428 at the region 416. Light 432 with a fraction of the initial illumination intensity, $\alpha I_o(\lambda)$, is specularly reflected from the surface 428, where α is a real number between 0 and 1. The acceptance cone 433 is the space through which light is diffusely reflected from the tissue 424 into the collecting optics 314, in this embodiment. In other embodiments, light may also be emitted or otherwise transmitted from the surface of the

tissue. In the embodiment illustrated in Figure 4B-1, it is the diffusely reflected light that is of interest, since spectral data obtained from diffusely reflected light can be used to determine the condition of the region of the sample. Since there is no specular reflection within the acceptance cone 433, only diffusely reflected light is collected, and the collected signal corresponds to $I_t(\lambda)$, where $I_t(\lambda)$ is the intensity of light diffusely reflected from the region 416 on the surface 428 of the tissue 424.

Please replace paragraph [0096] on pages 31 and 32, with the following paragraph, marked up to show the changes made to the prior version:

[0096] The ~~second~~ diagram 422 of Figure 4B-2 demonstrates the specular reflection of light incident to the surface 428 of a region 416 of tissue 424 with collection optics off-center, providing an acceptance cone 438 as shown. In the ~~second~~ diagram 422 of Figure 4B-2, light 434 with illumination intensity $I_o(\lambda)$ strikes the surface 428 of the tissue 424. Light 436 with a fraction of the initial illumination intensity, $\alpha I_o(\lambda)$, is specularly reflected from the surface 428, where α is a real number between 0 and 1. Unlike in the ~~first~~ diagram 420 of Figure 4B-1, there is specular reflection within the acceptance cone 438 in the ~~second~~ diagram 422 of Figure 4B-2, and so both diffusely reflected light and specularly reflected light reach the collecting optics 314. Thus, in the example illustrated in the ~~second~~ diagram 422, the collected signal corresponds to an intensity represented by the sum $I_t(\lambda) + \alpha I_o(\lambda)$. It may be difficult or impossible to separate the two components of the measured intensity, thus, the data may not be helpful in determining the condition of the region 416 of the tissue sample 424, due to the glare effect.